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GEOCON PROJECT NO. S8875-06-81 TASK ORDER NO. 81, CONTRACT NO. 03A0937



### GEOTECHNICAL MENVIRONMENTAL MOMATERIALS



Project No. S8875-06-81 May 23, 2006

Mr. Doug Coleman California Department of Transportation District 3 P.O. Box 911 Marysville, California 95901

Subject:

NEWELL MAINTENANCE STATION

NEWELL, MODOC COUNTY, CALIFORNIA

CONTRACT NO. 03A0937 TASK ORDER NO. 81

ADDITIONAL SITE INVESTIGATION REPORT

### Dear Mr. Coleman:

In accordance with the California Department of Transportation (Caltrans) Contract No. 03A0397 and Task Order (TO) No. 81, we have performed additional site investigation (ASI) activities at the Caltrans Newell Maintenance Station located in Newell, Modoc County, California (the Site). The ASI was performed in response to written directive from the North Coast Regional Water Quality Control Board as transmitted to Caltrans in an e-mail dated February 8, 2006.

The purpose of the scope of services outlined in TO No. 81 was to provide additional information regarding the nature and extent of soil and groundwater impacts at the Site and to determine the location and/or status of well MW-4. The requested scope of services included the performance of direct-push soil borings to facilitate the collection of soil and groundwater samples for chemical analysis.

Please contact us if there are any questions concerning the contents of this Report or if we may be of further service.

Sincerely,

GEOCON CONSULTANTS, INC.

David W/Bieber/CEG, CHG, PGP

Project Manager

DAVID W. BIEBER OF CERTIFIED ENGINEERING GEOLOGIST OF CALIFOR

West J. Bourgault Project Geologist

WJB:DWB:jaj

(3 + 2 CD)

Addressee

(1)

North Coast Regional Water Quality Control Board, Mr. Ronald Allen

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### ADDITIONAL SITE INVESTIGATION REPORT

### 1.0 INTRODUCTION

This Additional Site Investigation (ASI) Report was prepared for the California Department of Transportation (Caltrans) Newell Maintenance Station located in Newell, Modoc County, California under Caltrans Contract No. 03A0937 and Task Order (TO) No. 81.

### 1.1 Project Location and Description

The Site is the Caltrans Newell Maintenance Station located east of State Highway 139 on the north side of County Road 176 in the town of Newell, Modoc County, California. The approximate site location is depicted on the Vicinity Map, Figure 1. The Site consists of the fenced 6-acre Caltrans Newell Maintenance Station located within an approximately 21-acre parcel owned by Caltrans, which was a motor pool area for the former Tule Lake Internment Camp (the Camp). The 21-acre parcel includes the Site and a separately fenced 15-acre parcel which served as a former Modoc County maintenance facility (surplus property) and includes an historic former stockade building (formerly situated within a separate fenced portion of the surplus property). Additional investigation activities are currently proposed for that portion of the surplus property that was used by Modoc County and which includes two historical motor pool buildings, loading docks, and an historical storage building (Motor Pool Area). However, additional investigation activities are pending the completion of an Extended Phase I Archaeology Study (Archaeological Study). The Archaeological Study is anticipated to be completed in the fall of 2006. The 21-acre facility is depicted on the Historical Facility Map, Figure 2. The features within the Site and the adjacent Motor Pool Area are further depicted on the Area Map, Figure 3.

### 1.2 Background

The following background information was provided to us by Caltrans.

The Camp was used to house Japanese-Americans during World War II and is currently listed as both a State of California and a Federal Historic Monument. Caltrans has declared those Caltrans-owned portions of the Camp outside of the Site as surplus property. Under the agreement through which Caltrans acquired the property from the Federal government, those portions of the 21-acre parcel which become surplus property revert to Federal ownership. Caltrans is working with local historical societies and the Federal government to develop a plan to preserve the remnants of the Camp located on the surplus property as a National Historic Landmark.

The Camp Motor Pool Area has been used by Caltrans since the 1950s. Caltrans occupied one of the historic motor pool structures until 1993, when new maintenance facilities (the Site) were constructed

adjacent to the existing historic structures. Subsequent to the construction of the Site in 1993, one of the Camp motor pool buildings was leased to the Modoc County Road Department and was jointly used by them and the local abatement district. In 2003, Modoc County moved their operations to new offsite facilities and vacated the premises. The Caltrans surplus property portion of the Camp is currently unoccupied.

In August 1990, one 3,000-gallon diesel fuel underground storage tank (UST) and one 2,000-gallon unleaded gasoline fuel UST were removed from the Site. The former USTs were located southeast of the existing sand storage building. Since the tanks were side by side, removal of the USTs resulted in a single large UST excavation. The results of laboratory analysis on soil samples obtained from beneath the USTs upon removal indicated the presence of gasoline and diesel-range petroleum hydrocarbon impacts. Groundwater was encountered at an approximate depth of 10.5 feet (ft) below the ground surface (bgs) within the UST excavation. The groundwater was observed to be impacted by petroleum hydrocarbons.

CKY, Inc. subsequently performed a site investigation to evaluate the extent of petroleum hydrocarbon impacts to soil and groundwater resulting from the former UST refueling system. The site investigation included a shallow soil gas survey and the performance of 25 soil borings of which six were converted into groundwater monitoring wells (MW-1 through MW-6). Total petroleum hydrocarbons as gasoline (TPHg), diesel (TPHd), and motor oil (TPHmo) were detected in five of the six soil borings.

The results of groundwater monitoring activities performed in March and June 1992 indicated depths to groundwater ranging from 7.55 to 9.19 ft bgs. The groundwater flow direction was reported to be to the east and northeast at a gradient of 0.002. Dissolved-phase gasoline and diesel-range petroleum hydrocarbons were generally detected in well MW-1 (located within the tank excavation) and in downgradient wells MW-4 and MW-5. Wells MW-1, MW-2, MW-3, MW-5 and MW-6 were reportedly destroyed in July 1992. The status of well MW-4 is not known. The approximate former monitoring well locations are depicted on Figure 3. A Summary of Historical Groundwater Analytical Results is presented in Table 1.

Approximately 13,000 cubic yards of petroleum hydrocarbon-impacted soil were excavated in the vicinity of the former USTs and stockpiled onsite in August 1992. The soil was placed in a bioremediation cell in 1992 and was remediated by 1996. After successful remediation and receipt of approval from the North Coast Regional Water Quality Control Board (NCRWQCB), the soil was utilized as fill for a highway widening project. The approximate remedial excavation boundaries are depicted on Figure 3.

After the impacted soil was excavated, one of twenty-one confirmation soil samples obtained from the remedial excavation contained detectable TPHg and TPHd at concentrations of 10 and 48 milligrams per kilogram (mg/kg), respectively. TPHmo was detected in two of twenty-one soil samples at concentrations of 11 and 28 mg/kg. A Summary of Analytical Results for Excavation Confirmation Soil Samples is presented in Table 2.

In September 1998, Geocon performed ten direct-push soil borings in the vicinity of the remedial excavation and collected soil and groundwater samples for analytical testing. Groundwater was encountered at depths between 5.25 and 7.55 ft bgs. TPHg, TPHd, TPHmo, benzene and toluene were not reported above their respective laboratory method detection limits in the samples submitted from the September 1998 drilling activities. Ethylbenzene was reported in one soil sample at a concentration of 8.7 micrograms per kilogram (µg/kg). Total xylenes were detected in four soil samples at concentrations ranging from 5.9 to 71 µg/kg. A Summary of the Soil Analytical Results is presented in Table 3. TPHg was reported for the groundwater sample collected from boring B4(MS) at 0.2 milligrams per liter (mg/l). TPHd was reported in each of the groundwater samples at concentrations ranging from 1.4 to 1.8 mg/l. TPHd was also detected in the method blank at a concentration of 1.2 mg/l. The laboratory acknowledged that laboratory contamination was present during the analyses. Toluene was reported in the groundwater samples collected from borings B4(MS) and B9 at respective concentrations of 16 and 0.7 micrograms per liter (µg/l). Ethylbenzene was reported for the sample collected from boring B4(MS) in one groundwater sample at a concentration of 8.2 µg/l. Total xylenes was reported for four groundwater samples at concentrations ranging from 0.7 (B2) to 41 μg/l (B4). Methyl tert-butyl ether (MTBE) was reported for the groundwater samples collected for borings B7(MS) and B10 at respective concentrations of 4.3 and 3.4 µg/l. Various phases of investigations have been performed at the surplus property and at the Caltrans Newell Maintenance Station resulting in duplicate boring numbers. For this report, borings performed at the surplus property are differentiated with an (SP) notation and borings performed at the Caltrans Newell Maintenance Station are differentiated with an (MS) notation.

Per the request of Caltrans and the NCRWQCB, Geocon re-sampled groundwater at nine of the ten previous direct-push soil boring locations for reanalysis of TPHd in November 1998. TPHd was reported in each groundwater sample at concentrations ranging from 0.07 to 0.2 mg/l. The laboratory report noted that the TPHd reported for each sample is likely weathered diesel or fuel oil. A Summary of Groundwater Analytical Results is presented in Table 4.

### 1.3 Purpose

The purpose of the scope of services outlined in TO No. 81 was to provide additional data regarding the nature and extent of soil and groundwater impacts at the Site. In addition, the NCRWQCB requested further investigation in the vicinity of boring B11 (SP) and a determination of the location and/or status of the well MW-4.

### 2.0 **INVESTIGATIVE METHODS**

The following scope of services was performed as requested by Caltrans in TO No. 81.

### 2.1 **Pre-field Activities**

- Conducted a pre-work site visit with Caltrans representative Doug Coleman and Geocon representatives Dave Bieber and West Bourgault. The purpose of the pre-work site visit was to observe the boring locations, mark locations for Underground Service Alert (USA) and to determine drilling rig accessibility and potential utility conflicts. Representatives of the United States Park Service and the Bureau of Land Management, as well as a Caltrans biologist and a Caltrans archeologist also attended the pre-work site meeting to discuss possible impacts of the work to historically or biologically significant resources.
- Prepared a project-specific Health and Safety Plan (HSP) for the Site dated March 27, 2006. The HSP provided guidelines on the use of personal protective equipment and the health and safety procedures implemented during the field activities.
- Prepared the Additional Site Investigation Workplan (Workplan) dated April 14, 2006. The Workplan described the purpose of the soil borings, identified boring locations and field methodologies, and described the laboratory analytical program for the project.
- Retained the services of Gregg Drilling, a Caltrans-approved and California-certified subcontractor, to perform the direct-push sampling activities (C57 License No. 485165).
- Retained the services of Kiff Analytical LLC (Kiff), a Caltrans-approved and California-certified analytical laboratory (ELAP No. 2236), to perform chemical analysis of selected soil and groundwater samples.
- Retained the services of Cruz Brothers Locators, a Caltrans-approved independent pipe and cable locator, to provide additional clearance of boring locations relative to underground utilities.
- Provided the required 48-hour notification to USA prior to job site mobilization (USA Ticket Number 129563).

### 2.2 **Field Activities**

Cruz Brothers performed a utility survey on April 24, 2006, using pipe and cable locating equipment to clear each boring location. Cruz Brothers additionally performed a magnetic survey within a 15-foot radius of the suspected location of well MW-4 (based on measurements from existing buildings). The documented location of well MW-4 is in the asphalt drive area of the Site as depicted on Photo 1.

Three soil borings, B11(MS) through B13(MS), were advanced at the Site on April 24, 2006, to an approximate depth of 12 ft bgs to facilitate the collection of soil and groundwater samples utilizing a truck mounted direct-push rig. Soil samples were collected from each soil boring utilizing a hydraulically driven 4-foot-long soil sampler equipped with plastic liner sample tubes to facilitate sample handling and storage. Following retrieval of the sampler, the sample tube was cut at the desired sampling depth, capped with Teflon<sup>TM</sup> sheets and plastic end caps, labeled, chilled, and transported to

Kiff following standard chain-of-custody (COC) protocol. The approximate soil boring locations are depicted on Figure 3.

Each soil boring was logged in the field utilizing the Unified Soil Classification System (USCS) by a geologist under the direction of a California Professional Geologist. Boring logs indicating the soil and geologic conditions encountered and sample locations are presented in Appendix A. Soil samples were generally collected at 4-foot depth intervals in each boring. A portion of each soil sample was field screened with a photo-ionization detector (PID) to qualitatively assess the presence of volatile organic compounds.

A grab groundwater sample was collected from each boring by placing a 3/4-inch-diameter polyvinyl chloride (PVC) casing with a 10-foot section of 0.010-inch slotted screen into the boring. The sample was collected using a small-diameter stainless steel bailer lowered within the casing. The groundwater samples were transferred from the bailer to the appropriate laboratory-provided containers. Following the collection of the groundwater samples, the containers were labeled and placed in a chilled cooler pending delivery to Kiff following standard COC protocol. Each boring was backfilled with cement slurry.

Quality assurance/quality control (QA/QC) procedures utilized during the field activities included decontaminating the probe rods prior to the advancement of the borings and decontamination of the sampling equipment prior to, and following, each use. Decontamination consisted of washing the equipment in an Alconox® solution, followed by fresh water and distilled water rinse.

### 2.3 Laboratory Analyses

The soil and groundwater samples were analyzed by Kiff under standard turn-around time by the following methods:

- TPHg; benzene, toluene, ethylbenzene and total xylenes (BTEX); and MTBE following United States Environmental Protection Agency (EPA) Test Method 8260B.
- TPHd (using silica gel cleanup) following EPA Test Method 8015B Modified.

### 2.4 Quality Assurance and Quality Control Procedures

QA/QC measures were performed for each method of analysis with specificity for each analyte listed in the test method's QA/QC. QA/QC measures included the following:

• One method blank for every ten samples, batch of samples or type of matrix, whichever was more frequent.

- One sample analyzed in duplicate for every ten samples, batch of samples or type of matrix, whichever was more frequent.
- One spiked sample for every ten samples, batch of samples or type of matrix, whichever was more frequent, with spike made at ten times the detection limit or at the analyte level.

Prior to submitting the soil and groundwater samples to the laboratory, the COC documentation was reviewed for accuracy and completeness. Reproductions of the laboratory reports and COC documentation are presented in Appendix B.

### 3.0 INVESTIGATION RESULTS AND FIELD OBSERVATIONS

Soil and groundwater analytical results are discussed below along with observations made in the field.

### 3.1 **Boring Location Rationale**

Borings B11(MS) through B13(MS) were performed downgradient of the former USTs (based on the groundwater gradients calculated from the former monitoring wells). Borings B11(MS) and B12(MS) were placed south of the southeast corner of the remedial soil excavation limits. Boring B13(MS) was placed near the southeast corner of the equipment building, approximately 40 ft southeast of the originally proposed location, based on a MTBE detection in the grab groundwater sample from boring B7(MS) performed in 1998.

### 3.2 Soil and Hydrogeologic Conditions

The subsurface materials encountered during this additional site investigation generally consisted of fine to coarse sand. The distribution and stratigraphic orientation of these materials are interpreted to represent transgressive and regressive stratigraphic sequences of near-shore lacustrine deposits of ancient Klamath Lake. Copies of the boring logs are presented in Appendix A. No apparent petroleum hydrocarbon soil impacts (odor, discoloration and/or PID readings) were observed during field activities for borings B11(MS) through B13(MS).

Groundwater was encountered during the field sampling activities in borings B11(MS) through B13(MS) at depths between 7.2 and 8.0 ft bgs.

### 3.3 Soil Analytical Results

The soil sample collected from 4 ft bgs in each boring was submitted for analyses. TPHg, TPHd, BTEX and MTBE were not reported above their respective laboratory reporting limits for the three soil samples submitted for analyses.

The soil sample analytical results are summarized on Table 3. Laboratory reports and COC documentation are presented in Appendix B.

### 3.4 **Groundwater Analytical Results**

TPHd was reported for each of the groundwater samples collected from borings B11(MS) through B13(MS) at respective concentrations of 5.1, 16 and 0.4 mg/l. The laboratory Case Narrative accompanying the analytical report stated, "Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples B11-GW, B12-GW and B13-GW. These hydrocarbons are higher boiling than typical diesel fuel." TPHg, BTEX and MTBE were not reported above their respective laboratory reporting limits for the three samples. The laboratory results for the groundwater samples are summarized on Table 4. Laboratory reports and COC documentation are presented in Appendix B.

### 3.5 Laboratory QA/QC

We reviewed the analytical laboratory QA/QC provided with the laboratory report. The data show acceptable surrogate recoveries and non-detect results for the method blanks, and acceptable recoveries and relative percent differences for the matrix spikes and matrix spike duplicates (MS/MSDs) with the exception of the April 28, 2006, MS/MSDs for MTBE and tert-butanol (TBA). Appropriate recoveries were noted for the laboratory control samples. Kiff addresses the high MTBE and TBA MS/MSD recoveries in the Case Narrative accompanying the analytical report. The case narrative states, "Matrix Spike/Matrix Spike Duplicate Results associated with samples B11-GW(MS) and B13-GW(MS) for the analytes Tert-Butanol and Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample." Because MTBE was not reported for any of the six samples submitted, no qualifications of the data presented herein are necessary, and the data are of sufficient quality for the purposes of this report.

### 4.0 CONCLUSIONS AND RECOMMENDATIONS

TPHg, TPHd, BTEX and MTBE were not reported above the laboratory method detection limit for the three soil samples submitted for analyses. TPHd was reported at respective concentrations of 5.1, 16 and 0.4 mg/l for each of the grab groundwater samples collected from borings B11(MS) through B13(MS). However, the laboratory noted that these TPHd detections did not exhibit a typical diesel chromatographic pattern and were higher boiling that typical diesel fuel. TPHg, BTEX and MTBE were not reported above the laboratory method detection limits for any of the grab groundwater samples collected. Historical grab groundwater results collected from borings downgradient of the Site (1998 soil borings performed by Geocon) and upgradient of the Site at the Motor Pool Area (2002 soil borings performed by Geocon) have reported similar low level TPHd concentrations. The source or sources for low level TPHd impacts are unknown but may be associated with historical operations conducted at the Site or Motor Pool Area. Shallow groundwater conditions (less than 10 ft bgs) combined with permeable sands make it likely that any historic surface spills or surface application of oil would migrate to groundwater.

A magnetic survey was performed at the documented location of well MW-4. Based on the lack of an identified metallic well cover and the documented location of the well on the edge of the 1992 remedial soil excavation, well MW-4 was likely destroyed along with the other former onsite monitoring wells.

As reported in the *Supplemental Site Investigation Report*, prepared by Geocon, dated December 7, 1998, information provided by the Newell County Water District indicates that local water service is provided by municipal water wells. The water system consists of three production wells located upgradient of the Site on the west side of State Highway 139. The wells are screened at depths greater than 200 ft bgs.

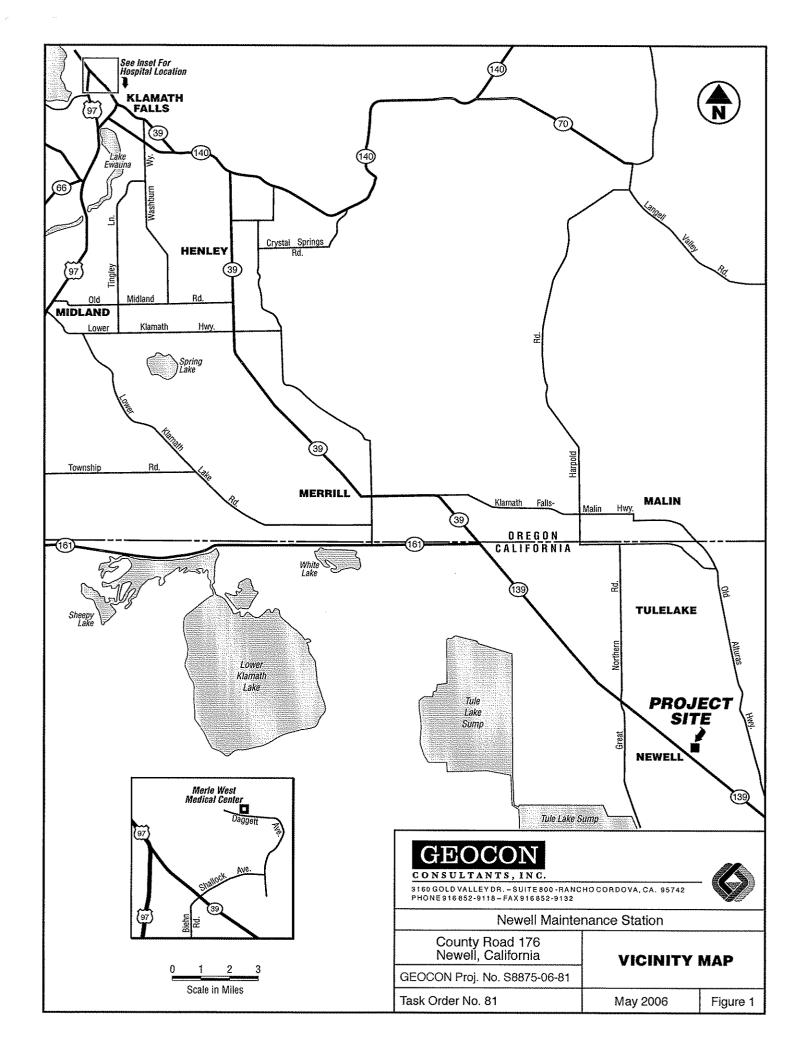
Based on the relatively low dissolved-phase petroleum hydrocarbon concentrations, the lack of benzene or MTBE detections, the completed "source removal" activities performed to date, and the apparent lack of onsite and/or downgradient potable water supply wells, the Site should be considered as a candidate for low risk closure pending the results of the additional investigation activities in the vicinity of boring B11(SP). Additional proposed investigation activities in the vicinity of boring B11(SP) will be performed following the completion of the Archeological Study.

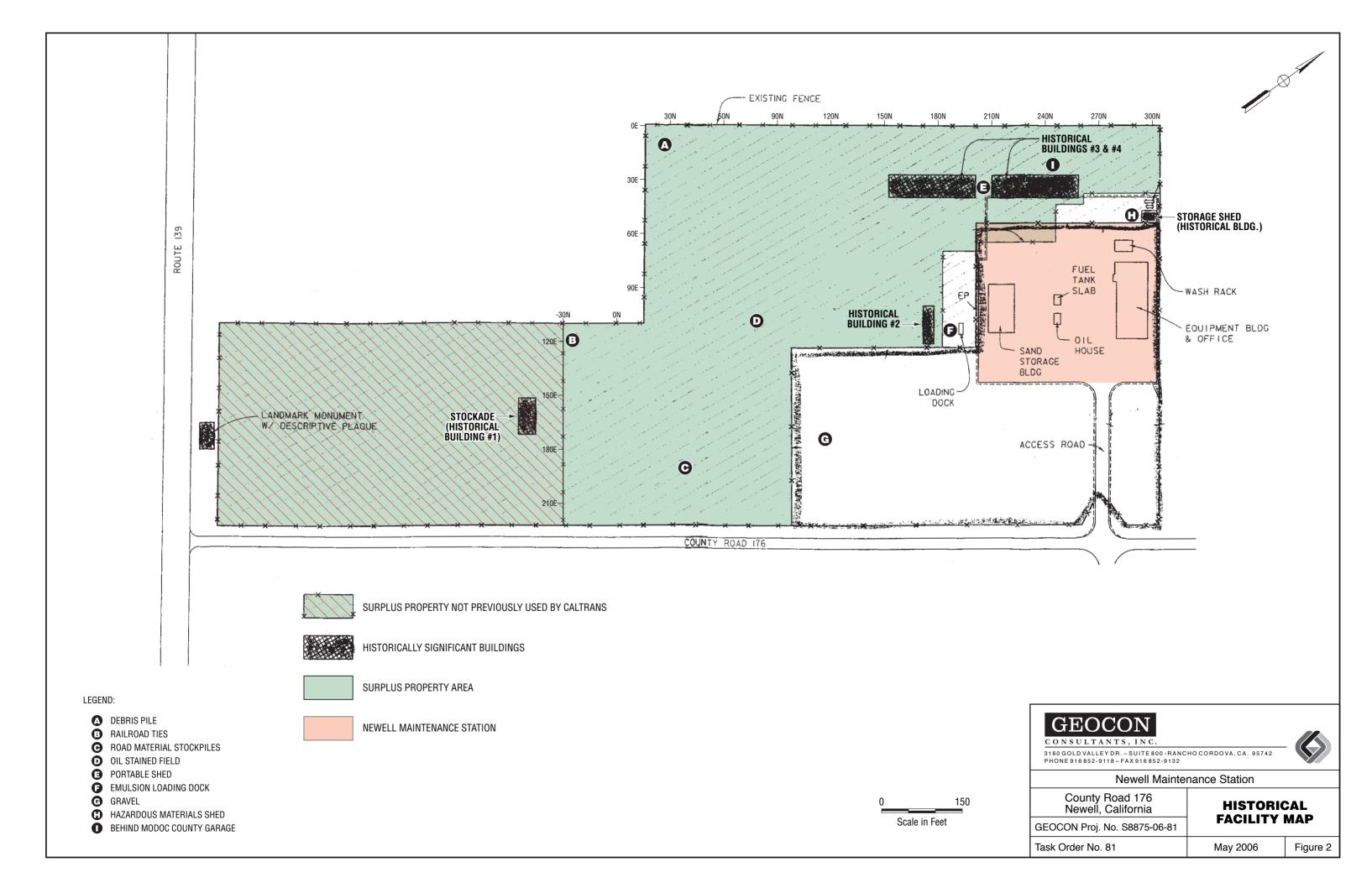
### 5.0 REPORT LIMITATIONS

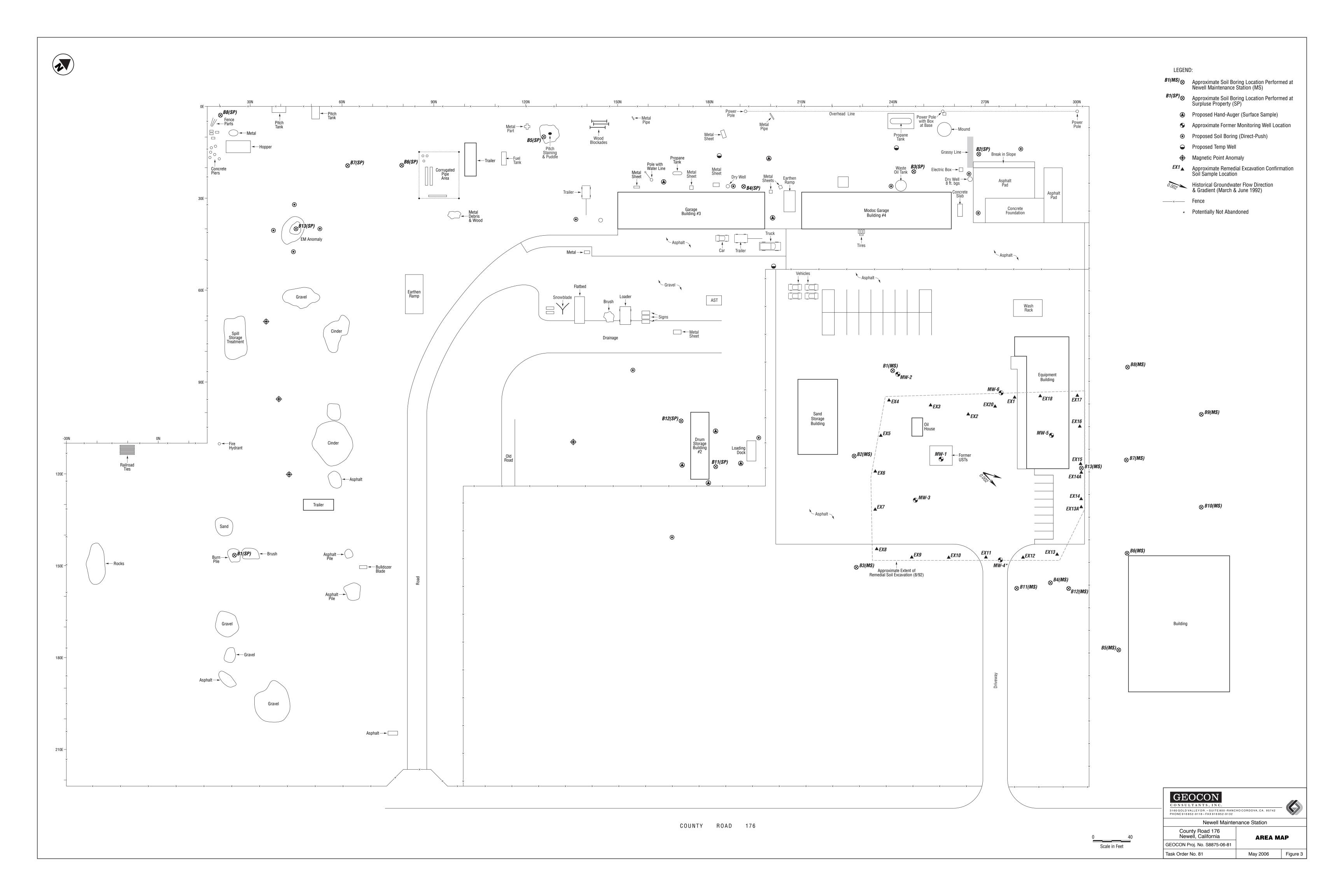
This report has been prepared exclusively for Caltrans. The information contained herein is only valid as of the date of the report.

The client should recognize that this report is not a comprehensive site characterization and should not be construed as such. The governing county agencies and/or other regulatory agencies may require additional soil and/or groundwater sampling. The findings as presented in this report are predicated on the results of the limited sampling and laboratory testing performed. In addition, the information obtained is not intended to address potential impacts related to sources other than those specified herein.

Therefore, the report should only be deemed conclusive with respect to the information obtained. No guarantee or warranty of the results of the report is implied within the intent of this report or any subsequent reports, correspondence or consultation either expressed or implied. Geocon strived to perform the services summarized herein in accordance with the local standard of care in the geographic region at the time the services were rendered.







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TABLE I	SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS	NEWELL MAINTENANCE STATION	MODOC COUNTY, CALIFORNIA

SAMPLE DATE         TPH6 (ug/l) (
16,000         2,500         1,000         2,200         230         2,300           4,300         4,000         190         160         <20         530           <50         <50         <0.5         <0.5         <0.5           <50         <0.7         1.3         <0.5         <0.5           <69         <0.7         1.3         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <50         <0.5         <0.5         <0.5         <0.5           <0.5         <0.5         <0.5         <0.5         <0.5           <0.5         <0.5         <0.5         <0.5         <0.5           <0.5         <0.5         <0.5
4,300         4,000         190         160         <20         530           <50
\$60         \$60         \$60.5         \$60
550       82       60.5 <t< td=""></t<>
71         <50         0.7         1.3         <0.5         2.1           69         <50
69       <50
\$6       \$6       \$6.5 <th< td=""></th<>
<50
\$50       240       \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$         \$50       310       \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$         \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$         \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$         \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$         \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$       \$\left(0.5)\$
<50
<50 <50 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0
<50 <50 <0.5 <0.5 <0.5 <0.5 <0.5

TPHg = Total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
HVO = Halogenated Volatile Organic Compounds
μg/l = Micrograms per liter
ND = Not detected
<= Less than laboratory test method detection limits Notes:

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SUMMARY OF ANALYTICAL RESULTS FOR EXCAVATION CONFIRMATION SOIL SAMPLES
NEWELL MAINTENANCE STATION
MODOC COUNTY, CALIFORNIA

TOTAL LEAD <5.0 5.0 <5.0 <5.0 <5.0 8,0 **5.0** 0.5 5.0 <5.0 <5.0 **5**0.0 <5.0 <5.0 <5.0 <5.0 <5.0 < 5.0 <5.0 <5.0 5.4 TOTAL XYLENES 0.0078 <0.5 <0.5 <0.5 0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 80.5 8.5 <0.5 <0.5 0.5 <0.5 <0.5 **0** 2 0.5 <0.5 ETHYLBENZENE (mg/kg) <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 0.5 **0.5** 0.5 **0.5** 0.5 0.5 0.5 0.5 TOLUENE (mg/kg) 0.010 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 **0.5** <0.5 <0.5 <0.5 <0.5 0.5 0.5 0.5 <0.5 <0.5 <0.5 <0.5 **0.5** <0.5 BENZENE (mg/kg) 0.0059 <0.5 <0.5 <0.5 0.5 0.5 <0.5 <0.5 <0.5 0.5 < 0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 0.5 <0.5 TPHmo (mg/kg) <10 01> <10 <10 01> 01> <10 0 | |-0 | |-<10 <10 <10 01× 01∨ 210 0 V <10 **2**10 0 | |-28 TPHd (mg/kg) 2 <10 V 10 <10 <10 0 | |-48 TPHg (mg/kg) <0.5 0.5 <0.5 0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 <0.5 0.5 <0.5 <0.5 **0.5** 101 SAMPLE DEPTH (feet) 11.15 11.15 11.15 10.50 10.50 10.50 10.50 10.50 5.74 9.84 9.84 8.86 9.84 9.84 9.51 9.84 9.51 9.84 9.84 9.84 9.84 SAMPLE 8/11/92 8/11/92 8/11/92 8/11/92 8/11/92 8/11/92 8/11/92 8/11/92 8/11/92 8/11/92 8/4/92 8/4/92 8/4/92 8/4/92 8/4/92 8/4/92 8/4/92 8/4/92 8/4/92 8/11/92 SAMPLE EX13A EX14A EX10 EX11 EX13 **EX14** EX15 EX16 EX18 EX5 EX6 EX<sub>9</sub> EX17 EX20 EX3 EX4 EX7 EX8 Ü. EX1 EX2

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# SUMMARY OF ANALYTICAL RESULTS FOR EXCAVATION CONFIRMATION SOIL SAMPLES NEWELL MAINTENANCE STATION MODOC COUNTY, CALIFORNIA TABLE 2

TOTAL LEAD (mg/kg)

TOTAL XYLENES (mg/kg)

ETHYLBENZENE

(mg/kg)

TOLUENE (mg/kg)

BENZENE (mg/kg)

TPHmo (mg/kg) TPHd (mg/kg) TPHg (mg/kg) SAMPLE DEPTH (feet) SAMPLE DATE

SAMPLE

Ü.

Notes:

TPHg = Total petroleum hydrocarbons as gasoline TPHd = Total petroleum hydrocarbons as diesel TPHmo = Total petroleum hydrocarbons as motor oil

mg/kg = Milligrams per kilogram <= Less than laboratory test method detection limits | =Laboratory notation, "Product is not typical gasoline."

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TABLE 3	SUMMARY OF SOIL ANALYTICAL RESULTS	NEWELL MAINTENANCE STATION	MODOC COUNTY, CALIFORNIA

SAMPLE 1.D. SAMPLE DATE  1998 Direct-Push Borings  B1-10 (MS) 9/22/98  B2-5 (MS) 9/22/98  B3-5 (MS) 9/22/98  B5-5 (MS) 9/22/98	TPHg (mg/kg)	TPHd	TPHmo	DENZENE	TOLLIENE	CTUVI BENZENE	TOTAL YVI FNES	MTBE
		(mg/kg)	(mg/kg)	(ga/kg)	(µg/kg)	(µg/kg)	iO iAL A i Lango (μg/kg)	(µg/kg)
	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	5.9	E-10-9
	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	9.0	1
	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	l
	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	1
	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	L +
B6-5 (MS) 9/22/98	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	1
B7-10 (MS) 9/22/98	<1.0	<1.0	<1.0	<5.0	<5.0	8.7	7.1	1
B8-7 (MS) 9/22/98	<1.0	<1.0	<1.0	<5.0	<5.0	0.5>	<5.0	1
B9-7 (MS) 9/22/98	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	6.74	į
B10-7 (MS) 9/22/98	<1.0	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0	l
2006 Direct-Push Borings B11-4 (MS) 4/24/06	<1.0	<1.0	1	<5.0	<5.0	<5.0	<5.0	<5.0
B12-4 (MS) 4/24/06	<1.0	<1.0	1	<5.0	<5.0	<5.0	<5.0	<5.0
B13-4 (MS) 4/24/06	<1.0	<1.0		<5.0	<5.0	<5.0	<5.0	<5.0

Notes:

TPHg = Total petroleum hydrocarbons as gasoline
TPHd = Total petroleum hydrocarbons as diesel
TPHmo = Total petroleum hydrocarbons as motor oil
MTBE = Methyl tert-butyl ether
mg/kg = Miligrams per kilogram
µg/kg = Micrograms per kilogram
< = Less than laboratory test method detection limits
--- = Not analyzed

B1-5 (MS)

——Boring performed at the Caltrans Newell Maintenance Station
—Sample depth in feet below surface grade
—Boring Identification

Project No. S8875-06-81 May 30, 2006 Page 1 of 2

TABLE 4
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
NEWELL MAINTENANCE STATION
MODOC COUNTY, CALIFORNIA

				MODOL	MODUC COUNTY, CALIFORNIA	KINIA			
SAMPLE I.D.	SAMPLE DATE	TPHg (mg/l)	TPHd (ng/l)	TPHmo (mg/l)	BENZENE (µg/l)	TOLUENE (µg/l)	ETHYLBENZENE (µg/l)	TOTAL XYLENES (µg/l)	MTBE (µg/l)
1008 Direct.Puch Borings	Roringe								
B1-W (MS) B1-W (MS)	9/22/98 11/3/98	<0.05	$1.5^{1}$ $0.2^{2}$	<0.05	<0.5	0.5	<0.5	<0.5	<0.5
B2-W (MS)	9/22/98	<0.05	1.61	<0.05	<0.5	<0.5	<0.5	7.0	<0.5
B3-W (MS) B3-W (MS)	9/22/98 11/3/98	<0.05	$0.1^2$	<0.05	<0.5	<0.5	<0.5	0.9	<0.5
B4-W (MS) B4-W (MS)	9/22/98 11/3/98	0.2	$\frac{1.7^1}{0.1^2}$	<0.05	<0.5	16	8.2	41	<0.5
B5-W (MS) B5-W (MS)	9/22/98 11/3/98	<0.05	$\frac{1.4^{1}}{0.08^{2}}$	<0.05	<0.5	-0.5  -	<0.5	<0.5	<0.5
B6-W (MS) B6-W (MS)	9/22/98 11/3/98	<0.05	$\frac{1.6^{1}}{0.09^{2}}$	0.05	<0.5	<0.5	<0.5	<0.5	<0.5
B7-W (MS) B7-W (MS)	9/22/98 11/3/98	<0.05	$1.6^{1}$ $0.09^{2}$	<0.05	<0.5	<0.5	<0.5	<0.5	4.3
B8-W (MS) B8-W(MS)	9/22/98 11/3/98	<0.05	$\frac{1.6^{1}}{0.08^{2}}$	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5
B9-W (MS) B9-W(MS)	9/22/98 11/3/98	<0.05	$\frac{1.5^{1}}{0.07^{2}}$	<0.05	<0.5	7.0	<0.5	0.9	<0.5
B10-W (MS) B10-W (MS)	9/22/98 11/3/98	<0.05	$1.8^{1}$ $0.08^{2}$	<0.05	<0.5	<0.5	<0.5	. <0.5	3.4
2006 Direct-Push Borings B11-GW (MS) 4//	. <b>Borings</b> 4/24/06	<0.05	5.13	!	<0.5	<0.5	<0.5	<0.5	<0.5
B12-GW (MS)	4/24/06	<0.05	163	2	<0.5	<0.5	<0.5	<0.5	<0.5
B13-GW (MS)	4/24/06	<0.05	0.4³		<0.5	<0.5	<0.5	<0.5	<0.5

Project No. S8875-06-81 May 30, 2006 Page 2 of 2

# SUMMARY OF GROUNDWATER ANALYTICAL RESULTS NEWELL MAINTENANCE STATION MODOC COUNTY, CALIFORNIA TABLE 4

MTBE	(hg/l)
TOTAL XYLENES	(hg/J)
ETHYLBENZENE	(hg/l)
TOLUENE	(µg/l)
BENZENE	(l/grl)
TPHmo	(mg/l)
TPHd	(mg/l) (mg/l)
TPHe	(mg/l)
	MPLE DATE
	SAMPLE I.D. SA

Notes:

TPHg = Total petroleum hydrocarbons as gasoline TPHd = Total petroleum hydrocarbons as diesel

TPHmo = Total petroleum hydrocarbons as motor oil

MTBE = Methyl tert-butyl ether

μg/l = Micrograms per liter mg/l = Milligrams per liter

<= Less than laboratory test method detection limits

--- = Not analyzed

(MS) = Boring performed at the Caltrans Newell Maintenance Station

= Laboratory contamination, analyte present with Method Blank

<sup>2</sup> = Laboratory report notation, "Sample contains hydrocarbons that do not match diesel or fuel oil. However, quantitation is based on diesel standard."

<sup>3</sup> = Samples analyzed using silica gel cleanup. Laboratory report notation, "Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples B11-GW, B12-GW and B13-GW. These hydrocarbons are higher boiling than typical diesel fuel."

B1-5 (MS)

-Boring performed at the Caltrans Newell Maintenance Station -Sample depth in feet below surface grade -Boring Identification



### SITE PHOTO NO. 1





GEOCON Proj. No. S8875-06-81

County Road 176 Newell, California

### APPENDIX



PROJECT NO. \$8875-06-81

PROJECT NO.	58875-0	0-91	<del></del>	
DEPTH IN FEET PENETRAT. RESIST. BLOWS/FT.	SAMPLE NO.	BORING NO. B11 (MS)  DATE DRILLED 4/24/2006 WATER LEVEL (ATD) 8.0'  EOUIPMENT POWERPROBE DRILLERGREGG DRI	SOIL (USCS)	HEADSPACI (PPM)
<u> </u>			LLING	
		SOIL DESCRIPTION	CP	
- 1 - 2 - 3 - 4 - 5 - 6 7 - 8 9 10 11 12 12 12 12	B11-4 1315 B11-8 1321 B11-12 1325	FILL GRAVEL/cinders - 1/4-1/2" diameter  ALLUVIUM Loose, dry to slightly moist, dark reddish brown, fine to coarse SAND with silt  - saturated  BORING TERMINATED AT 12 FEET	GP SM	0
		BORING TERMINATED AT 12 FEET		

Figure 1, Log of Boring B11 (MS), page 1 of 1

ENV\_NO\_WELL NEWELL BORINGS.GPJ 05/30/06

	71		***************************************
BORING ELEVATION:	П	ENGINEER/GEOLOGIST:	WEST BOURGAULT
	-		

PROJECT NO. S8875-06-81

PROJECT NO	S8875	-00-81			
DEPTH IN FEET PENETRAT. RESIST.	SAMPLE NO.	гиногову	BORING NO. B12 (MS)  DATE DRILLED 4/24/2006 WATER LEVEL (ATD) 7.2'  EQUIPMENT POWERPROBE DRILLENGEGG DRILLING	SOIL (USCS)	HEADSPACE (PPM)
		<del>                                     </del>	SOIL DESCRIPTION		
		0.00	FILL	GP	
- 1 - - 2 - - 3 - - 4 -	B12-4		GRAVEL/cinders - 1/4-1/2" diameter  ALLUVIUM  Dense, slightly moist, light brown, Silty fine SAND  -	SM	0
- 5 - - 6 - - 7 - - 8 -	1343		Dense, moist, dark brown, fine to coarse SAND with silt	SM	
- 9 - - 10 - - 11 -	B12-8 1346		- saturated		0
- 12 -	B12-12 1351		Dense, moist, light brown, Silty fine SAND BORING TERMINATED AT 12 FEET	SM	0

Figure 2, Log of Boring B12 (MS), page 1 of 1

ENV\_NO\_WELL NEWELL BORINGS.GPJ 05/30/06

	7		
BORING ELEVATION:		ENGINEER/GEOLOGIST:	WEST BOURGAULT

PROJECT NO. \$8875-06-81

BORING NO. B13 (MS)  DATE DRILLED 4/24/2006 WATER LEVEL (ATD) 7.5' EQUIPMENT POWERPROBE DRILLERGREGG DRILLING  SOIL DESCRIPTION  FILL GRAVEL/cinders - 1/4-1/2" diameter ALLUVIUM Dense, slightly moist, light brown, Silty fine SAND  ALLUVIUM Dense, moist, dark brown, fine to coarse SAND  SM  0  B13-8 9 10 11 12 B13-12
FILL GRAVEL/cinders - 1/4-1/2" diameter  ALLUVIUM Dense, slightly moist, light brown, Silty fine SAND   B13-4  - 5 -
GRAVEL/cinders - 1/4-1/2" diameter  ALLUVIUM Dense, slightly moist, light brown, Silty fine SAND   B13-4 1403  B13-8 1406  B13-8 1406  - saturated  - saturated  - saturated

Figure 3, Log of Boring B13 (MS), page 1 of 1

ENV\_NO\_WELL NEWELL BORINGS.GPJ 05/30/06

BORING ELEVATION:	ENGINEER/GEOLOGIST:	WEST BOURGAULT
	 L	 

## APPENDIX (13



Date: 5/3/2006

West Bourgault Geocon Consultants, Inc. 3160 Gold Valley Road, Suite 800 Rancho Cordova, CA 95742

Subject: 3 Soil Samples and 3 Water Samples

Project Name: Newell MS Project Number: S8875-06-81



Dear Mr. Bourgault,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,



Date: 5/3/2006

Subject:

3 Soil Samples and 3 Water Samples

Project Name: Project Number :

Newell MS S8875-06-81

### Case Narrative

Matrix Spike/Matrix Spike Duplicate Results associated with samples B11-GW and B13-GW for the analytes Tert-Butanol and Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples B11-GW, B12-GW and B13-GW. These hydrocarbons are higher boiling than typical diesel fuel.

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By:

Jde Kiff



Project Name : Newell MS
Project Number : \$8875-06-81

Report Number: 49683

Date: 5/3/2006

Sample: **B11-4** Matrix: Soil Lab Number: 49683-01

Sample Date :4/24/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	4/28/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	4/28/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/28/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	5/2/2006
1-Chlorooctadecane (Silica Gel Surr)	107		% Recovery	M EPA 8015	5/2/2006

Sample: **B12-4** Matrix: Soil Lab Number: 49683-04

Sample Date :4/24/2006

Sample Date :4/24/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	4/28/2006
Toluene - d8 (Surr)	95.8		% Recovery	EPA 8260B	4/28/2006
4-Bromofluorobenzene (Surr)	114		% Recovery	EPA 8260B	4/28/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	5/2/2006
1-Chlorooctadecane (Silica Gel Surr)	97.6		% Recovery	M EPA 8015	5/2/2006

Approved By:

Joel Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Project Name :

**Newell MS** 

Project Number: \$8875-06-81

Sample: **B13-4** 

Matrix : Soil

Lab Number : 49683-07

Report Number: 49683

Date: 5/3/2006

Sample Date :4/24/2006

Sample Date :4/24/2006		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	4/28/2006
Toluene - d8 (Surr)	95.5		% Recovery	EPA 8260B	4/28/2006
4-Bromofluorobenzene (Surr)	112		% Recovery	EPA 8260B	4/28/2006
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015	5/2/2006
1-Chlorooctadecane (Silica Gel Surr)	109		% Recovery	M EPA 8015	5/2/2006

Sample: B11-GW

Matrix: Water

Lab Number: 49683-10

Sample Date :4/24/2006

Sample Date :4/24/2000		Method		A 1 1	<b>D</b>
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/28/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/28/2006
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	4/28/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/28/2006
TPH as Diesel (Silica Gel)	5100	500	ug/L	M EPA 8015	5/1/2006
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	5/1/2006

Approved By:

de Kiff

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800



Project Name: Newell MS

Project Number: **\$8875-06-81** 

Matrix: Water

Lab Number: 49683-11

Report Number: 49683

Date: 5/3/2006

Sample Date :4/24/2006

Sample: B12-GW

Sample Date :4/24/2006	8.6 m m m m m m m	Method		A	Data
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/28/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/28/2006
Toluene - d8 (Surr)	96.4		% Recovery	EPA 8260B	4/28/2006
4-Bromofluorobenzene (Surr)	110		% Recovery	EPA 8260B	4/28/2006
TPH as Diesel (Silica Gel)	16000	2000	ug/L	M EPA 8015	5/1/2006
Octacosane (Diesel Surrogate)	88.0		% Recovery	M EPA 8015	5/1/2006

Sample: B13-GW

Matrix: Water

Lab Number: 49683-12

Sample Date :4/24/2006

Sample Date :4/24/2000		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	4/28/2006
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/L	EPA 8260B	4/28/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	4/28/2006
Toluene - d8 (Surr)	97.6		% Recovery	EPA 8260B	4/28/2006
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	4/28/2006
TPH as Diesel (Silica Gel)	400	50	ug/L	M EPA 8015	5/2/2006
Octacosane (Diesel Surrogate)	104		% Recovery	M EPA 8015	5/2/2006

Approved By:

2795 2nd St., Suite 300 Davis, CA 95616 530-297-4800

Date: 5/3/2006

Date Analyzed

Analysis Method

Method Reporting Limit Units

Measured Value

4/28/2006 4/28/2006 4/28/2006 4/28/2006

EPA 8260B EPA 8260B EPA 8260B EPA 8260B EPA 8260B

7/6n 7/6n 7/6n 7/6n 7/6n

0.50 0.50 0.50 0.50 5.0

< 5.0 < 50 98.1

< 0.50 < 0.50 < 0.50 < 0.50

4/28/2006 4/28/2006 4/28/2006

EPA 8260B EPA 8260B EPA 8260B

ng/L

QC Report: Method Blank Data

Project Name: Newell MS

Project Number: \$8875-06-81

	Manager	Metrod	ţ	Annhuin	Date	
Parameter	Value	Limit	Units	Method	Analyzed	Parameter
TPH as Diesel (Silica Gel)	< 1.0	1.0	mg/Kg	M EPA 8015 5/2/2006	5/2/2006	Benzene
1-Chlorooctadecane (Silica Gel Surr)	96.1		%	M EPA 8015 5/2/2006	5/2/2006	Toluene Ethylbenzene
TPH as Diesel (Silica Gel)	> 50	90	ng/L	M EPA 8015 5/1/2006	5/1/2006	Total Xylenes
Octacosane (Diesel Surrogate)	102		%	M EPA 8015 5/1/2006	5/1/2006	Metnyl-t-butyl etner (M I BE.) TPH as Gasoline
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006	Toluene - d8 (Surr)
Toluene	< 0.0050	0.0050	mg/Kg	<b>EPA 8260B</b>	4/28/2006	4-Bromofluorobenzene (Surr)
Ethylbenzene	< 0.0050	0.0050	mg/Kg	<b>EPA 8260B</b>	4/28/2006	
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	4/28/2006	
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	<b>EPA 8260B</b>	4/28/2006	
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	4/28/2006	
Toluene - d8 (Surr)	101		%	<b>EPA 8260B</b>	4/28/2006	
4-Bromofluorobenzene (Surr)	68.6		%	EPA 8260B	4/28/2006	
Benzene	< 0.50	0.50	ug/l.	EPA 8260B	4/28/2006	
Toluene	< 0.50	0.50	ug/t	EPA 8260B	4/28/2006	
Ethylbenzene	< 0.50	0.50	ng/L	EPA 8260B	4/28/2006	
Total Xylenes	< 0.50	0.50	ng/L	<b>EPA 8260B</b>	4/28/2006	
Methyl-t-butyl ether (MTBE)	< 5.0	5.0	ug/l.	EPA 8260B	4/28/2006	
TPH as Gasoline	< 50	20	ug/l.	<b>EPA 8260B</b>	4/28/2006	
Toluene - d8 (Surr)	6.3		%	EPA 8260B	4/28/2006	
4-Bromofluorobenzene (Surr)	108		%	<b>EPA 8260B</b>	4/28/2006	

Approved By: Johi Kiff

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Date: 5/3/2006

QC Report: Matrix Spike/ Matrix Spike Duplicate

Project Name: Newell MS

Project Number: \$8875-06-81

Spiked Sample Relative Sample Percent Percent Recov. Diff. Limit
Duplicate sd Spiked ple Sample ent Percent ov. Recov.
Spiked Sample Percent Zed Recov.
Date Analyzed
Analysis Method
ate I e Units
Duplicate Spiked Sample Value
Spiked Sample Value
Spike Dup.
Spike Level
Sample
Spiked
Darameter

KIFF ANALYTICAL, LLC

Approved By: Joe Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Date: 5/3/2006

QC Report : Laboratory Control Sample (LCS)

Project Name: Newell MS

Project Number: \$8875-06-81

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
	0.0390	mg/Kg	EPA 8260B	4/28/06	98.5	70-130
	0.0390	mg/Kg	<b>EPA 8260B</b>	4/28/06	100	70-130
	0.195	mg/Kg	<b>EPA 8260B</b>	4/28/06	94.4	70-130
Methyl-t-Butyl Ether	0.0390	mg/Kg	EPA 8260B	4/28/06	83.7	70-130
	40.0	ug/L	EPA 8260B	4/28/06	97.8	70-130
	40.0	ng/L	<b>EPA 8260B</b>	4/28/06	93.6	70-130
	200	ng/L	<b>EPA 8260B</b>	4/28/06	93.8	70-130
Methyl-t-Butyl Ether	40.0	ng/L	EPA 8260B	4/28/06	114	70-130
	40.0	ug/L	EPA 8260B	4/28/06	98.4	70-130
	40.0	ng/L	<b>EPA 8260B</b>	4/28/06	95.5	70-130
	200	ng/L	<b>EPA 8260B</b>	4/28/06	9.66	70-130
Methyl-t-Butyl Ether	40.0	T/6n	EPA 8260B	4/28/06	108	70-130
	20.0	mg/Kg	M EPA 8015 5/2/06	5/2/06	92.8	70-130

Approved By:

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

COC.fn8 (5/00) 20 かっ I wk = Results by 5 p.m. of the 5th bus. day  $\overset{\mathscr{A}}{\sim}$ 70 2 6 20 8 Š Chain-of-Custody Record and Analysis Request õ For Lab Use Only Page / of 2 Thom. 10# 715-1 48 hr = Results by 5 p.m. of the 2nd bus. 24 hr = Results by 5 p.m. of the next bus. day Initial Orth Jo Time 16 20 Date Orth Jo Time 16 20 Coolant present: 69 / No IS ht = Results by 9 a.m. of the next bus, day 12 hr/24 hr/48 hr/72 hr/3 TAT Samale Receipt Temp ° 4.2 Lab No. 47683 TOTAL (X) WET (X) (S.962\rS47) bea. (S0928 AGE) Asiocarbons (EPA 8260B) **Analysis Request** EPA 8260B (Full List) Lead Scay. (1,2 DCA & 1,2 EDB - 8260B) 7 Oxygenates (8260B) 5 Oxygenates (8260B) 7 Oxygenates/TPH Gas/BTEX (8260B) Remarks: Bill to: 5 Oxygenates/TPH Gas/BTEX (8260B) TPH Gas/BTEX/MTBE (8260B) (8108M) IIO notoM as H9T NI OI 11 PZ 4010 TPH as Diesel (M8015) کی انکم 子。生 <u>」。</u> 山の土 BTEX/TPH Gas/MTBE (802/B/M8015) 土 BTEX (8021B) Matrix Email Address: bouge 140 gellening MATER/SOIL ☐.doc ☐ other Sampler Signature: Received by Laboratory: Method Preserved NONE 54 ICE Ç 720 Olive Drive, Suite D EONH Received by: Received by HCI Clary Olary Lab: 530,297,4800 Fax: 530,297,4803 416 \$529.132 Davis, CA 95616 9116.852 4118 □.pdf □.xls (Type/Amount) Container Phone No.: Time FAX No.: 1221 Time वाद्याभागाना ॥ Time SCEEVE 04240 AOV Im 04 Date 17.70 17.70 المور 2 Time 183 1325 **公**公 155 1313 7/24/06 1315 13.5 Sampling Distribution: White - Lab, Yellow - File, Pink - Originato P.O. No. ANALYTICAL LLC Project Name/Location: Designation 1 West Bourse 58875-06-81 Company/Address Project Manager: Project Number: Relinquighed by: Relinquished by: Relinquished by: Sample B1-GN 813-12 Newell 1812-12 8-219 121-12 812-8 × 1811-8 P13-4 K-218 11-118

COC.fh8 (5/00) 4 wk = Results by 5 p.m. of the 5th bus. day 5 Chain-of-Custody Record and Analysis Request Page 2 of 2 For Lab Use Only 72 hr = Results by 5 p.m. of the 3rd bus, day 24 hr = Results by 5 p.m. of the next bus. day 12 hr = Results by 9 a.m. of the next bus, day  $\times$ X TAT 12 hr/24 hr/48 hr/72 hr(1 wk Lab No. 49683 (X) T.E.W. (X) JATOT (2.982\r247) bs9. Volatile Halocarbons (EPA 8260B) **Analysis Request** EPA 8260B (Full List) Lead Scav. (1,2 DCA & 1,2 EDB - 8260B) (80608) eatenagyxO 7 5 Oxygenates (8260B) 7 Oxygenates/TPH Gas/BTEX (8260B) Remarks: Bill to: 5 Oxygenates/TPH Gas/BTEX (8260B) TPH Gas/BTEX/MTBE (8260B) TPH as Motor Oil (M8015) Siper del w(drosm) leseid as HqT BTEX/TPH Gas/MTBE (8021B/M8015) BTEX (8021B) Email Address. to gant to grecening co Matrix WATERSOIL West Bouram It A HA ☐.pdf ☐.xls ☐.doc ☐ other Received by Laboratory: Method Preserved NONE × ICE × 720 Olive Drive, Suite D  $\epsilon$ ONH Received by: Received by: FAX NO.: × HCI × Class Lab: 530.297.4800 Fax: 530.297.4803 Sampler Signature: 9115.258 9118 Davis, CA 95616 (Type/Amount) Container Phone No.: 1221 Time Time 120 SLEEVE 909770 AOV Im 04 十 Date Time 医医 4 24 PS 1435 Sampling P.O. No.: Project Name/Location: NAST Bourgans Company/Address. Designation 18-90-54885 News IN MS Project Manager: Project Number: Relinquished by: Relinquished by: Zelinquished by: Sample Choco B13-GW R12-GW

Distribution: White - Lab, Yellow - File, Pink - Originato